

The Hield.

Making Manure

Now that the busy season of the farmer is over, and he has spare time to devote to other matters than the preparation and cultivation of the soil and the garnering of his crops, his first object should be to ascertain in what way he can most profitably increase the supply of that most indispensable necessity to every good farmer -manure, for without an abundant supply of food, plants can no more grow and yield returns of food to man or animals than the latter can exist without it.

There are many ways in which, by careful husbandry, the farmer can not only save, but largely increase the quantity of manure produced on his farm.

Time was, and not very long ago, either, when the virgin soil of Canada seemed so rich and inexhaustible that to manure it was considered a superfluity of labour, and greatpiles of plant food were allowed to accumulate round barns, stables, and sheds for years, till the sills of the buildings rotted away so much as to require them to be rebuilt; and we have known many cases where, in order to save trouble, the buildings themselves were removed to a new location, and the piles of manure allowed to remain on the old spot, constantly decomposing, and spreading disease and even death to both man and beast, through the foul gases generated by decomposition. Even now we can recall places where we have this season seen the same process going on, especially in the back townships. amount of manure allowed to go utterly to waste every year, on many farms, at a fair estimate, would, if judiciously saved and applied to the soil, increase their pro- that spread atraw, and during the winter ductive capabilities fully one-third. But the stock will work the whole up, the as that made in the common way.

this kind of farmers take no agricultural paper-nor, probably, a paper of any kind-so we need not preach to them on the value of wasted plant food. Were we to tell one of them that he could make a hundred, even two hundred dollars, by hauling out his wasting manure heap and spreading it over his fields, he would perhaps say that he had no time to do it; but if we told him that a twenty dollar gold piece was buried in his barn-yard, he would for certain turn over every bit of it, and work early and late, sunshine or rain, till he had spent ten times the value of the piece in the labour of looking for it.

The thrifty, intelligent class of farmers -those who aim at constantly improving their farms and adding to their resources and fertility, do not need to be told the value of manure; but by the exercise of a little of the powers of their brains, they may readily find means of increasing their supply of plant food, without going to any great expense in purchasing an artificial article. If swamp is anywhere near, now is the time to go out and dig a ditch round the sides of a small patch in it that the surface water may dry out before the ground freezes. Or still better, dig out the muck at the edge of the swamp, throwing it up in heaps on the dry land adjoining, so that it may get partly dried out and the action of decomposition begin. Then the whole barn-yard and approaches to it, the lanes leading into it, through which the cattle lounged at milking times, should be thoroughly cleaned out, and all the material scraped off be piled into a large heap, out of the reach of the further trampling of stock, and covered with a few inches of dry earth. Then cover the whole yard with a thick layer of swamp muck, on

droppings from the stables and byres can be added. When the first layer of straw has been pretty well worked up, another layer of muck and straw may be added, or if the yard gets too soft and dirty, the manure made may be added to the heap already collected, and a fresh layer of muck and straw laid down If the stock is kept well housed, as it should be in our cold climate, they will manufacture more manure, and of a richer quality, than if they have to roam over a large yard driving each other from corner to corner. A vast deal of material can be found, out of which to make plant food, but the chief thing is to keep enough stock to make it possible to work up all the material that can be had into a form that will render it fit for immediate use for the next year's crops. If straw is very abundant it would pay to cut it up fine before using it as bedding for stock, or litter for the stockyard, as it works up and decomposes a great deal more quickly when cut than when whole. Burnt peat makes a famous absorbent of ammoniacal manures where it can be had near enough to make it pay to draw the sods from the bog.

In any case manure is always better for being properly made and the matter of composting it attended to. Nature's mode is but alow, and unless the farmer takes pains to work up and manipulate the materials at his command in order to hasten their decomposition, he will never get a sufficient supply of really good manure. It is wonderful what a difference in both bulk and value there is between manure made by proper management in composting, and that which is simply the result of throwing straw on the yard and allowing it to be trampled into a solid mass by stock, and then drawn out to the fields in a long undecomposed green state. Well-made manure is worth twice as much